

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Policies,
Procedures and Rules for Development of
Distribution Resources Plans Pursuant to Public
Utilities Code Section 769.

Rulemaking 14-08-013
(Filed August 14, 2014)

**COMMENTS OF BLOOM ENERGY, INC. ON ASSIGNED COMMISSIONER'S
RULING REGARDING DRAFT GUIDANCE FOR USE IN UTILITY SECTION 769
DISTRIBUTION RESOURCE PLANS (R.14-08-013)**

December 12, 2014

Erin Grizard
Director, Regulatory and Government Affairs
Bloom Energy Corporation
1299 Orleans Drive
Sunnyvale, CA 94089
Phone: (408) 543-1073
Fax: (408) 543-1501
erin.grizard@bloomenergy.com

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Policies,
Procedures and Rules for Development of
Distribution Resources Plans Pursuant to Public
Utilities Code Section 769.

Rulemaking 14-08-013
(Filed August 14, 2014)

**COMMENTS OF BLOOM ENERGY, INC. ON ASSIGNED COMMISSIONER'S
RULING REGARDING DRAFT GUIDANCE FOR USE IN UTILITY SECTION 769
DISTRIBUTION RESOURCE PLANS (R14-08-013)**

I. Introduction

Bloom appreciates the opportunity to participate in this proceeding and provide these comments on the *Assigned Commissioner's Ruling (ACR) Regarding Draft Guidance for Use in Utility Section 769 Distribution Resource Plans (DRPs)*.

Founded in 2001, Bloom Energy is headquartered in Sunnyvale, California where the company manufactures its breakthrough all-electric solid oxide fuel cell (SOFC) technology called a Bloom Energy Server. Bloom Energy Servers are among the most efficient and reliable electricity generators available. Bloom Energy Servers produce reliable base load electricity from natural gas or renewable natural gas (biogas) via a highly efficient non-combustion process that results in dramatically lower emissions, virtual elimination of criteria pollutants and essentially no water usage. The result is a new option for energy infrastructure that combines increased electrical reliability and improved energy security with significantly lower environmental impact. Bloom Energy, the leading all-electric SOFC provider, has installed nearly 200 projects with over 140 MW of capacity. Bloom has developed projects on both the customer side of the meter and the utility side of the meter in increments ranging from 200kW to tens of MWs. Bloom's fuel cell systems were invented in California, are manufactured in California and are being deployed throughout California to help the state meet its energy, environmental and economic objectives.

Bloom's reliable and clean fuel cell systems provide customers with predictable energy costs, reliable energy and reduced emissions. Reliable, targeted, greenhouse gas (GHG) and air pollutant reducing technologies like Bloom's Energy Servers should play an integral role in the state's energy plans to help address increasing environmental goals, the need to integrate intermittent technologies and the need to quickly deploy reliable, resilient resources in critical areas.

II. Comments

As previously stated in Bloom's Comments on the OIR, Bloom considers the Distribution Resources Plans (DRPs) a vital step towards better understanding the impact distributed energy resources (DERs) have on today's grid. The DRPs will set a course for the increased deployment of DERs as part of modernizing and enhancing our electric grid and meeting the state's energy and environmental goals. In this regard Bloom applauds the overall approach of the Guidance Ruling. Bloom offers comments to refine specific provisions within the Guidance Ruling, ensuring that information gathered via the DRPs is appropriately prioritized to offer maximum benefit.

Optimal Location Benefit Analysis

The Optimal Location Benefit Analysis criteria as set forth the Guidance Ruling provides a sound basis for the analysis. As Bloom previously commented, the calculation methodology for optimal locations of DERs should be transparent about assumptions; list costs and benefits and consider those costs/benefits in comparisons to "regular" expenses; and be designed to assess portfolios rather than individual investments. Moreover, the analysis should contain a mechanism for tracking locational benefits after installation to collect data to further the understanding of locational benefits. This could be achieved as part of the "Maintenance and Updates to Locations Analysis" (Guidance Ruling, Page 17) and will be key to ensuring the analysis of cost and benefits stays current.

Reliability and Resiliency

Bloom again commends the Guidance Ruling for including two necessary features of a smarter power grid – resiliency and reliability. As noted multiple times in the Guidance Ruling the identification of where and how “a DER can enhance the reliability of service and resiliency against service interruptions at a specific location” is a suggested important component of DRPs (Guidance Ruling, Page 28). Bloom Energy Servers are distributed, on 24-7, clean, resilient, reliable and renewable ready all-in-one. This means that Bloom can offer a solution where intermittent technologies cannot, or where power quality and reliability are needed in addition to GHG reductions. Bloom’s modular and scalable Energy Server provides on-site generation in 100kW increments that can be scaled to tens of MWs. The small foot print provides more energy density, allowing for siting in space constrained areas. The Energy Server’s clean, quiet, non-combustion process makes it suitable for communities sensitive to “NIMBY” issues. Due to its inherent redundant architecture, Bloom can remain online while conducting normal maintenance activities enhancing its overall reliability and uptime. Maybe most significantly, Bloom systems are capable of islanding and continuing to provide power to dedicated loads, even in the event of a grid outage. These attributes are recognized by Bloom’s growing list of leading commercial customers, and these positive attributes must also be recognized by the DRPs.

With regard to utility installations Bloom has installed 30 MWs at targeted substations on the east coast. Bloom Energy Servers can be co-located at substations – as we have done for Delmarva Power – or at other optimal locations identified by utilities to provide not only local capacity but also to provide grid resiliency and overall reliability in targeted remote or capacity constrained areas. This new option to install energy infrastructure in targeted locations that combine increased reliability with lower environmental impacts must be considered by utilities in the DRPs.

Bloom Energy Servers can be renewable with the use of biogas. While in-state biogas supplies are currently limited the new policy directives in California (such as AB 1900) and increased development of biogas supplies are promising. Bloom’s energy servers do not need any equipment modification to be “renewable.”

In addition to highlighting the need to consider the reliability and resiliency benefits of DERs, Bloom encourages the Commission to establish additional criteria that would provide a quantitative value for DERs that can be deployed quickly. Time-to-power is an increasingly important quality to meet reliability needs as more intermittent technologies come online to meet the State's RPS goals.

Lastly, Bloom encourages the Commission to include in this opening "phase" of the DRPs an assessment of the ability of DERs as '....an alternative provider of distribution reliability functions, including voltage regulation (etc.)' (Guidance Ruling, Page 25) instead of pushing this to Phase 2A. The reliability of the grid is an immediate need – especially in light of new challenges, not the least of which is managing potential climate change. This could easily be reviewed and planned for in the near term as part of the Locational Benefit analysis and methodology.

Inclusion of Other DER

As Bloom previously commented, the Commission should ensure the DRPs are complete and effective and therefore should take into consideration all of the technologies that are endorsed by State policies and currently participating in other programs to advance distributed generation. While the Guidance Ruling "encourages" the utilities to include any DG that provides GHG reductions Bloom believes such should be mandatory for a variety of reasons. First, there exists today a fleet of DG installations – many of which were deployed through state mandated programs – throughout California. To simply ignore resources that are currently deployed would be haphazard and not present an accurate picture of the status quo. Also, many of the non-renewable, GHG reducing DG technologies currently deployed are in fact "renewable ready" and once a plentiful source of renewable gas is available – as is the goal and directive of the State – these projects and future projects can be renewable. Instead of furthering a siloed approach, DRPs should take the opportunity to be holistic and technology-agnostic in order to be accurate and to reflect the many policies that relate to distributed generation.

III. CONCLUSION

The DRPs contemplated under the Guidance Ruling present California with an opportunity to establish a grid of the future, and the state should ensure that the DRPs provide a full picture of the ability of DERs to provide for the reliability and resiliency of the modern grid. The DRPs should be drafted to include and accurately assign value to any resources that will be integral in the future of CA's grid. Bloom asks that this proceeding and the DRPs adopt a holistic, attribute-based approach to reimagining the distribution grid, and remain technology-neutral. Bloom looks forward to continued participation in this critical proceeding.

Dated December 12, 2014

Respectfully submitted,

/s/ Erin Grizard

Erin Grizard

Director, Regulatory and Government
Affairs

Bloom Energy Corporation

1299 Orleans Drive

Sunnyvale, CA 94089

Tel: (408) 543-1073

Fax: (408) 543-1501

Email: erin.grizard@bloomenergy.com